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PATENT ABSTRACTS OF JAPAN

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(72)Inventor : KOJIMA AKIRA

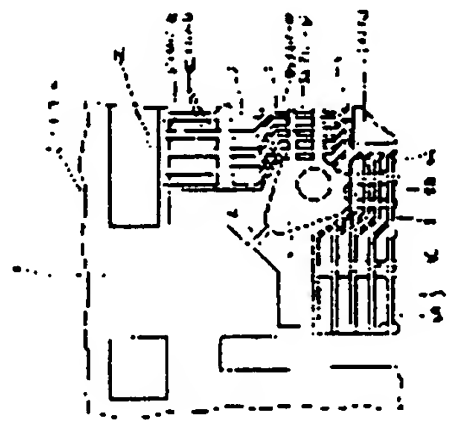
NAKANO SEIJI

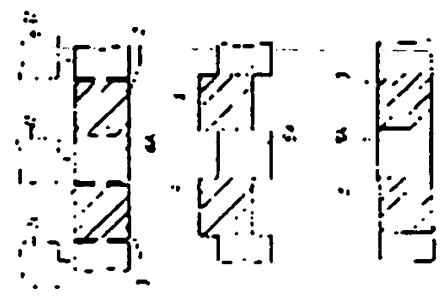
(54) LEAD FRAME AND SEMICONDUCTOR DEVICE USING IT

(57)Abstract:

PURPOSE: To prevent a punch from being worn away by a method wherein a tie-bar part is pushed out from one side face without being stamped completely, its one part is cut and said pushed-out part is shaped by being pushed back from the other side face so that the tie-bar part can be separated and removed, e.g., by being pressed comparatively slightly by using the punch.

CONSTITUTION: A square die pad 2 is arranged in the central part of a lead frame 1; support bars 4 are stretched in diagonal directions from its four corners; tip parts are shaped collectively together with a lead frame disk 1a; intermediate parts act as reinforcing sheets 5. Ends of lead parts 3 face side edges of the die pad 2; tie-bar parts 6AW6D are shaped in parallel in such a way that intermediate parts or end parts of the lead parts 3 are interlinked with one another. The tie-bar parts 6AW6D are pushed out by about one-third by using a metal mold when the lead frame is formed; then, when they are pushed back to original positions, the intermediate parts are not cut; both upper parts and lower parts are cut. A chip is fixed to the die pad 2; wires are bonded to the lead parts 3; a resin is molded. After the resin has been solidified, prescribed tie-bar parts are pressed slightly by using punches 11, and leads 3W3 can be separated easily.





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